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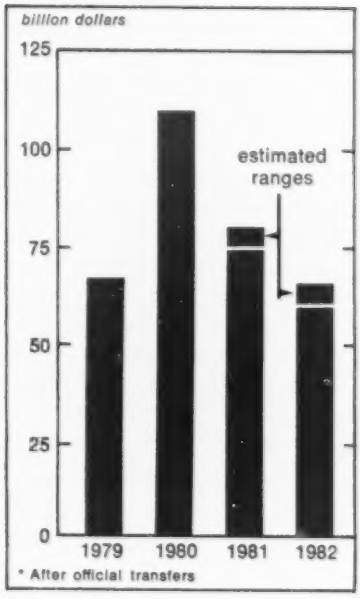
OPEC Surplus Narrowing Steadily

The world petroleum market has turned soft, with supply currently running some 2-3 million barrels per day in excess of demand. This large surplus is the result of two main influences: reduced oil consumption in the OECD nations and continued high Saudi Arabian production. Oil consumption in the industrial countries fell 7%-8% last year, owing to price-induced conservation and sluggish economic growth. At the same time, Saudi production was held at over 10 million barrels per day, compared with the pre-1979 ceiling of 8.5 million barrels per day. Despite pressure by other OPEC members at the May meeting, the Saudis refused to cut their output or boost prices (currently $32 per barrel) without obtaining reductions in the official oil prices of other OPEC members—particularly from the North African countries—whose prices ranged between $36-$41 per barrel. The result has been sharp downward pressure on the oil market. Spot prices have fallen by $7 per barrel; premiums have disappeared; and contract prices charged by some OPEC and many non-OPEC oil exporters have recently been cut or discounted by up to $4.25 per barrel.

OPEC current account surplus*



How long these market conditions will continue remains uncertain. If the OPEC price hawks were to agree to a reduction of $3-$4 per barrel in posted prices, Saudi Arabia might respond with both a substantial production cut and an increase in the price of its benchmark crude to $34 per barrel. Under these circumstances, the price of OPEC oil would average about $35 per barrel for the year, and total OPEC oil exports in 1981 would fall roughly 11% from 1980. Assuming a 23% increase in payments for imports of goods and services, the 1981 combined current-account surplus of the OPEC countries would total about $75-$80 billion, after allowance for official transfers of some $8 billion. This compares with the $110-billion surplus recorded last year. If the Saudis do not raise their prices well before year-end, the 1981 OPEC surplus could be even smaller.

Barring adverse political developments, the OPEC surplus is likely to shrink further in 1982. Although the pace of world economic growth will be somewhat faster and progress in energy conservation slower next year, market conditions appear unlikely to warrant much, if any, of an increase in the real price of oil. If oil prices rise 10% while goods and services imports grow by 23%, the OPEC surplus on current account would drop to approximately $60-$65 billion. It should be borne in mind, however, that the assumptions underlying these estimates could be quickly invalidated by unforeseen political events in an already tense Middle East.

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Sterling weakness threatens higher U.K. inflation, but increased interest rates still unlikely.

After a period on the sidelines, the pound has once again been caught up in a wave of currency movements. Since the U.S. dollar's sharp recovery in early June, sterling has slipped below $2.00 for the first time since February 1979. The pound has also weakened against most other currencies, albeit to a lesser extent. Its trade weighted index (1975=100) is currently 93.8, the lowest it has been since mid-1980. This sharp decline threatens to boost the rate of inflation just when the government is intent on reducing it to single digits. Consequently, there is speculation that the authorities will raise interest rates in defense of the pound. Such a move, however, would aggravate the domestic economic recession. Industrial production is already some 9% below its year-earlier level, and unemployment is at a post-war high of 10.4%. There are few signs of near-term recovery as after-tax incomes are rising more slowly than prices, and a fall in the volume of consumption is expected. Furthermore, economic sluggishness among Britain's trading partners suggests that U.K. exports will be weak for the remainder of 1981. Higher interest rates would thus only intensify recessionary pressures. The government is therefore likely to postpone a rise in interest rates as long as possible in the hope that economic developments elsewhere will remove some of the downward pressure on sterling.

Austria's hard-currency policy compromised by DM weakness.

Recent foreign-exchange market developments are complicating Austria's "hard-schilling" policy. The schilling has been linked to the German mark since 1973. Until 1980, this linkage resulted in an appreciation of the Austrian currency that held down inflation and permitted a substantial decline in the rate of wage increase. Over the course of 1980, however, and more so in the first quarter of 1981, the DM's weakness has led to a depreciation in the schilling's trade weighted value—4.6% in 1980 and nearly 9% in the twelve months to March 1981. Such depreciation has not been justified by Austria's inflation rate relative to its trading partners. While this real exchange-rate depreciation is benefiting Austrian export industry, it is fueling inflation. Year-on-year wholesale price inflation accelerated to almost 10% in April. Critical to Austria's economic prospects is whether it can maintain wage growth of about 7%, or whether increased inflation will trigger higher wage settlements, which would render any gains in competitiveness short-lived.

Spain's economic anemia accompanied by rising inflation and worsening payments balance.

Weakness continues to characterize the Spanish economy. A slight recovery was achieved in the last quarter of 1980, but the momentum has not been sustained. Consumer demand is particularly depressed, in the face of 1.5 million unemployed—300,000 more than 12 months ago—and the public-sector deficit continues to grow at an alarming rate. The external sector is also lackluster. The peseta has weakened against the strong dollar, but not against the European Monetary System currencies. As a result, Spanish imports are tending to be more costly, but Spain's competitiveness vis-á-vis the EEC has not improved. Preliminary data for the first two months of 1981 show the current-account deficit expanding to $1.4 billion from $1 billion in the same period last year. It is widely expected that in view of the world recession, the current account will not improve, and a deficit in excess of $6 billion appears virtually certain for 1981. The only bright spot on the economic scene is the agreement between unions and employers to limit wage rises to 9%-11% in 1982. And even this is uncertain, given that the rate of consumer price inflation is 15.7% and rising.

A sharp turnaround for Japan's current-account balance.

The Japanese balance-of-payments showing has improved significantly in the last two months. The seasonally adjusted trade surplus narrowed slightly to $1.74 billion in May from $1.87 billion in April but was still nearly double the $995-million surplus recorded in March. The improved trade balance helped shift the current account into surplus by $827 million in April and $514 million in May, after running deficits of $559 million and $353 million in February and March. For the first five months of 1981, Japan recorded a current-account surplus of $332 million—a sharp contrast to the deficit of $7.83 billion posted in the

year-earlier period. The continued sluggishness of the domestic economy is expected to hold down imports for a while longer. But prospects for Japanese exports, particularly of autos, are not very bright, given the world recession and rising protectionism. For the fiscal year that began April 1, automobile exports to the United States and Canada are to be restricted. And although Japan has resisted demands to restrict automobile exports to the European Economic Community as a whole, it has agreed to limit auto exports to Germany and Belgium and may consider curbs for other EEC countries as well.

Indonesian oil receipts hold firm, helping swell reserves.

Despite the current softening in world crude oil prices, Indonesian net foreign-exchange earnings from oil and gas are expected to reach $13 billion this year, pushing reserves over $12 billion even before yearend. The surcharge on one grade of crude has been reduced, but Indonesia's oil price structure has remained largely intact, averaging approximately $36 per barrel. The quality of Indonesian crude and its proximity to Japan and other Asian markets ensure that it will remain a favored supplier. Meanwhile, despite its rising reserves, Indonesia has secured pledges of continued foreign aid. The International Donors Group has agreed to provide $2.1 billion in concessional loans for fiscal 1981-82, the same amount as in 1980-81. Helped by these aid receipts, the overall balance-of-payments surplus for 1981-82 should reach $4 billion.

Puerto Rican economy affected by cutback in U.S. government spending.

The Puerto Rican economy is being pinched by the U.S. government's curtailment of public-spending programs. The reduction in CETA public-service jobs (in preparation for the planned termination of the program) has had an immediate impact, contributing to the unemployment rate's climb to 19.6% in April, up 2.1 percentage points from April 1980. Puerto Rico could be affected further by Congressional reduction of other federal programs—particularly food stamps, Medicare, and social security payments. Such potential limits on federal funds would be partly offset by the upturn in Puerto Rican manufacturing. Also, the inflation rate has been kept moderate—running at an 8.6% annual rate in April. Still, with housing and construction languishing because of high interest rates, Puerto Rico's overall economic showing in 1981 will be modest.

Nicaraguan economic revival proceeding only slowly.

Nicaragua's economy turned up on a number of fronts in 1980 following the severe destruction wrought by the 1979 civil war. Real GDP advanced 10%, after contracting by 25% in the previous year, the rate of inflation was nearly halved to 27%, and a sizable portion of external debt was rescheduled. This performance was still less satisfactory than anticipated, however, and Nicaragua remains vulnerable. GDP per capita is equal to four-fifths of the pre-war level, and about 20% of the labor force is unemployed. In addition, foreign reserves are negligible, and the country's net foreign asset position exceeds negative $415 million. Little improvement is expected in the near future. Economic revitalization requires addressing the principal constraints to growth: the lack of confidence on the part of the private sector (which controls some 60% of the country's productive capacity) and the severe foreign-exchange squeeze—both of which ultimately depend on the political evolution of the country.

Reduced supply and increased demand will put upward pressure on cattle prices.

Upward pressure on beef and cattle prices in the latter part of 1981 appears likely. Feedlot industry losses have been significant for several years now, in response to slack demand, and this has meant little or no expansion in beef supplies. Indeed, U.S. beef production in 1981 is estimated at 21.3 billion pounds, down 1% from 1980. U.S. pork production, which reached an all-time high of 16.5 billion pounds last year, is expected to be down sharply. Demand, on the other hand, appears likely to recover somewhat. Although meager gains in consumers' disposable incomes in the United States depressed beef and pork demand in 1980 and early 1981, some rebound is expected in the latter part of this year as economic recovery begins to take hold. Thus, the combination of reduced supplies and some increase in demand will put upward pressure on cattle prices later in the year.

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International Banking Facilities Approved

The Federal Reserve has finally authorized the establishment of international banking facilities (IBFs) at banking offices within the United States. This action—to take effect December 3—is potentially one of the most far-reaching developments in Euromarkets in over a decade.

An IBF will function as an offshore branch. It will not be subject to Federal Reserve reserve requirements or rate ceilings on deposits. Moreover, in several states (including New York), IBFs will not be subject to state and local income taxes.

General powers

Beyond these, there are both differences and similarities between IBFs and typical offshore branching powers. IBFs will not offer transaction services such as checking accounts. Credit extended by and deposits received by IBFs must be related to non-U.S. activities. Borrowers as well depositors must be foreign residents, except that an IBF may also deal with other IBFs and with its U.S. parent. Time deposits issued by IBFs will be non-negotiable, with a minimum maturity or notice of probably two days for nonbank customers (the final regulations have not been issued). Interbank transactions—involving other IBFs, foreign commercial and central banks, and foreign official institutions—will have a minimum one-day maturity. A minimum transaction size will also be imposed on deposits to and withdrawals from IBF accounts (probably $100,000). Loans and deposits may be denominated in U.S. as well as foreign currencies.

At least two requirements, however, threaten to impose serious handicaps on U.S. banks establishing IBFs. First, the Federal Reserve's two-day minimum maturity on nonbank time deposits will deter the placement of funds by depositors seeking the flexibility of overnight positions. Second, FDIC deposit insurance will apparently be extended to the first $100,000 of IBF deposits. This will mean a premium assessment of ½ of 1% (or about 8 basis points). This is an unnecessary cost in a highly competitive market where spreads are often as little as 10-15 basis points.

Competitiveness implications

The basic objective in providing for IBFs has, of course, been to attract international financing business from offshore locations to the United States. Initially, a sizable shift to IBFs is likely from Caribbean sites such as Nassau and the Cayman Islands. In addition, a relatively small shift to IBFs will also take place in "IBF-eligible" loans and deposits (mainly of foreign banks and governmental entities) now booked at U.S. domestic banking offices.

The most uncertain element of longer-run IBF growth lies in the ability of IBFs to capture a share of the financing business that in the past has gone to London and, increasingly, to Bahrain, Singapore, and other offshore centers. At least two factors play central roles in the outlook for changes in market shares. First, U.S. banks have found facilities and personnel costs in overseas centers to be considerably higher than in the United States. From an operating standpoint alone, assuming no differences in other factors, there is strong incentive to seek a greater home orientation to new business.

How much Euromarket business returns to the United States will also reflect differences between the United States and other centers in funding costs and loan spreads. In essence, the question is whether—and to what degree—investors will accept somewhat lower interest rates from IBFs in the United States than rates paid in non-U.S. centers. In the past, it has been virtually impossible to estimate the impact of differences in locational preference because of the U.S. regulations. Eurodollar time deposit rates have tended to be higher than domestic U.S. certificate-of-deposit rates by roughly the size of U.S. reserve requirements (around 65 basis points at current interest rates) and deposit insurance premiums (about 8 points). For example, in May 1981, the three-month Euro time-deposit rate averaged 18.95% and CDs, 18.20%.

The risk preferences (or aversions) associated with the United States versus political jurisdictions of other Euromarket centers will be reflected in market rates once IBFs commence operations. If those preferring exposure to the sovereignty risks associated with the United States (presumably including many U.S. multinationals) accept a slightly lower deposit rate—even 15-20 basis points—a substantial volume of rate-sensitive offshore credit demands could be expected to move to IBFs.

Of course, even with somewhat lower deposit rates in, say, New York, a shift of Euromarket borrowing to a New York IBF would also require that spreads between funding costs and loan rates not be wider than in London or other major centers. From current indications, it seems likely this condition will be met. Most major Euromarket participants are already established in the United States, and most of these could operate an IBF. Moreover, a number of U.S. banks having little or no direct Euromarket participation would probably find it desirable (and relatively inexpensive) to establish an IBF. This could be done in a bank's head office or through an Edge Act office in another area. While most of these institutions may be relatively small by Euromarket standards, they are likely to play aggressive roles, especially in dealings with U.S. multinationals.

In sum, the authorization of IBFs is a major step in the deregulation of U.S. banks in international financial markets. A sizable amount of financing business is likely to return to the United States in coming years. This will reflect greater competitiveness of U.S. banks, not only in terms of their operating efficiencies, but also in the financing terms that can be offered to both depositors and borrowers.

Richard C. Aspinwall

The U.S. Economy

Latin America Bimonthly Survey of Business and Finance

COUNTRIES	CURRENT BUSINESS CONDITIONS	EXPORTS		GNP IN 1980		BALANCE OF PAYMENTS					MONEY AND BANKING							COUNTRIES
		6 months ending	change from year earlier	in billions of dollars	per capita	latest data	reserves (less gold) in million $	12-month change	months of imports covered	use of IMF credit, millions of dollars	current influences on payments	12-month changes: latest data	consumer prices	latest data	money supply(M1)	exchange rate in U.S. dollars June 17, 1981	change from year earlier	current monetary conditions	
Argentina	First quarter GDP stagnant; agriculture and manufacturing decline while financial services gain.	Mar.	— 3%	127.0	$4,550	Feb.	4,538	— 53%	5.8	0	Peso devalued 30% on June 2.	May	+ 88%	Mar.	+ 80%	.00026	—57%	Interest rates at high levels.	Argentina
Brazil	Industrial output slowing because of monetary and fiscal restraints; inflation eases slightly.	Apr.	+ 26%	237.2	1,991	Apr.	5,285	— 20%	2.5	0	Increased gasohol output cuts oil import demand.	May	+120%	Apr.	+ 57%	.0125	—39%	Domestic bank loans more costly than foreign loans.	Brazil
Chile	Foreign investments of $188 million approved in Jan.-Apr., nearly equal to all approvals in 1980.	Mar.	— 12%	22.8	2,060	Apr.	3,297	+ 40%	6.0	93	Exports down 12.5% in first quarter.	Feb.	+ 29%	Dec.	+ 57%	.0270	0	Foreign reserves growth decelerates.	Chile
Colombia	Rapid growth of auto industry spurs added employment and exports.	Dec.	— 11%	36.8	1,360	Apr.	4,703	+ 14%	11.0	0	Coffee export earnings decline.	Mar.	+ 29%	Dec.	+ 28%	.0210	—13%	Bank loans growing rapidly.	Colombia
Costa Rica	Restrictive fiscal and monetary policies to be pursued.	Mar.	— 12%	4.8	2,130	Apr.	104	+ 28%	0.9	51	First-quarter trade gap was $91 mn., vs. $118 mn. in first-quarter 1980.	Dec.	+ 18%	Dec.	+ 17%	.0610	—49%	Credit policy restrictive.	Costa Rica
Dominican Republic	Cement output, an indicator of construction, down 1 million bags in first quarter from 1980.	Nov.	+ 14%	7.1	1,310	Apr.	170	+ 58%	1.3	30	Imports in first quarter up 10% from year earlier.	Nov.	+ 8%	Dec.	+ 3%	Par	—	Liquidity is tight.	Dominican Republic
Ecuador	New president, Osvaldo Hurtado, faced with problems of inflation and export decline.	Apr.	— 10%	9.2	1,100	Apr.	802	+ 1%	4.5	0	Oil price softness affects export earnings.	Mar.	+ 15%	Mar.	+ 31%	.0350	— 5%	Bank reserve requirements raised from 25% to 28%.	Ecuador
El Salvador	Agreement with Mexico and Venezuela should ensure adequate oil supply through 1982.	Sept.	+ 3%	3.8	840	Apr.	88	— 14%	1.1	7	Sugar output up 17% from 1979/80; coffee and cotton down 10%, 23%.	Dec.	+ 19%	Mar.	— 6%	.4025	0	Credit availability limited.	El Salvador
Honduras	Coffee production seriously affected by spread of disease.	Dec.	+ 3%	2.4	654	Jan.	138	— 33%	1.5	14	Tourism down sharply; evidenced by 30% decline in hotel occupancy.	Aug.	+ 18%	Mar.	+ 4%	.5025	0	Restrictive monetary policy prevails.	Honduras
Jamaica	Eight state-owned hotels offered for sale as part of divestment program.	Nov.	+ 26%	3.2	1,460	Mar.	96	+ 7%	0.9	411	World Bank loan obtained to boost exports, rehabilitate banana industry.	Nov.	+ 30%	Jan.	+ 24%	n. a.	—	Monetary policy is restrictive.	Jamaica
Mexico	Surveys indicate continued rapid investment spending, but increased concern about inflation.	Feb.	+ 63%	167.0	2,300	Nov.	2,795	+ 45%	1.5	0	Oil export price reduced by $4 per barrel.	Apr.	+ 29%	Jan.	+ 34%	.0410	— 8%	Mexican withholding tax inhibits U.S. bank loans.	Mexico
Nicaragua	To spur cotton output, authorities eliminate export tax, increase credit and foreign-exchange supply.	Dec.	— 22%	1.9	730	Nov. '79	85	+ 42%	4.5	26	Pick-up in output of major cash crops will boost export earnings.	Dec.	+ 27%	Aug.	+ 90%	.0995	+ 1%	Interest rates on 3-6-month time deposits set at 9%.	Nicaragua
Panama	Commercial, services, and free-zone activity giving strong boost to business spending.	Dec.	+ 11%	3.5	1,805	Mar.	80	— 11%	0.7	35	Shipping congestion eases in Canal.	Feb.	+ 9%	Dec.	+ 10%	Par	—	Credit available.	Panama
Paraguay	Economy growing at 10% real pace, led by agriculture and construction.	Feb.	+ 20%	4.6	1,505	Apr.	802	+ 24%	14.3	0	Hydroelectric plant financing offsets payments deficit.	Feb.	+ 19%	Dec.	+ 26%	.0080	0	Loans to exporters have priority.	Paraguay
Peru	Automobile assemblers gearing up to increase production this year.	Dec.	+ 11%	17.2	965	Nov.	1,923	+ 63%	8.2	420	Imports of $870 million in first quarter nearly double year-earlier total.	Mar.	+ 58%	Nov.	+ 55%	.0025	—38%	Lending rates lowered slightly.	Peru
Puerto Rico	Manufacturing activity rises in response to strong U.S. first-quarter GNP advance.	Feb.	— 4%	11.4	3,530	Mar.	6,519*	+ 9%	—	—	Slowdown planned for U.S. transfer payments.	Apr.	+ 9%	Mar.	+ 15%	Par	—	Business loans in Jan.-Mar. up 14%.	Puerto Rico
Trinidad & Tobago	George Chambers, new Prime Minister, stressing natural gas development.	Feb.	+ 18%	5.4	4,780	Apr.	2,848	+ 27%	10.7	0	Reserves at record high in April.	Mar.	+ 16%	Jan.	+ 22%	.4300	+ 3%	Bank liquidity is ample.	Trinidad & Tobago
Venezuela	International reserves up nearly $2 billion from Dec. '80 to April, spurring faster money growth.	Jan.	+ 24%	51.4	3,690	Apr.	8,475	+ 41%	9.3	0	Residual fuel prices cut $2.25-$3.75 per barrel; output to be cut 10%.	Apr.	+ 17%	Mar.	+ 27%	.2332	0	Net foreign assets rising.	Venezuela

*Commercial bank assets

World Interest Rates

market rates of June 17, 1981; bond yields as of June 12, 1981

in percent per annum	U.S.	Canada	Britain	Belgium	France	Germany	Italy	Netherlands	Switzerland	Japan
Central Bank Discount Rate	14.00 penalty-large banks 18.00	19.07	12.00	13.00	9.50	7.50*	19.00 penalty rate 22.00	9.00	5.00	6.25
Day-to-Day Money	19.75 June 18	20.50	11.00	8.60	20.00	11.90*	19.875	11.375	3.50	7.3125
Treasury Bills 91-day, Middle Rates	14.20	18.70	12.125	15.75	n. a.	n. a.	18.50 71-day	no dealing	no market	5.625 two-month
Commercial Paper prime, 3-month, asked	15.00 finance paper	19.20 finance paper 15% tax w/h	12.9375	12.90 Certified	19.375 Interbank	no market	no market	no market	no market	not traded
Bankers' Acceptances 3-month, asked	15.65	19.10 15% tax w/h	12.125	12.90 Certified	not traded	9.90*	22.90	no market	9.625	no market
Government Bonds Long-term, new and old issues, average yield	12.88	15.05	14.31	10.583 20% tax w/h	16.945	10.75*	19.64	11.43	5.77	8.281
Industrial Bonds prime, long-term, new and old issues, average yield	14.00 Aa Industrials	15.78	15.29	15.746	18.26	11.30*	21.41	13.05	6.5625	7.17
Bank Short-Term Rate to Best Borrowers (prime rate)	20.00	20.00	13.00	18.25	20.60	14.25	22.50 ⅛ quar'ly fee on outstdng.	13.50	9.50	6.75
Bank Time Deposits 3-month	17.78 Cert. of Dep.	18.50	12.6875	15.30	19.50	13.05*	10.75	11.875 large deposits	9.00 residents only	4.25 20% tax w/h
Eurocurrencies 3-month, asked	17.00	no market	12.625	no market	20.50	12.50	no market	11.75	9.75	no market
Exchange Rates—in U.S.$ rates floating against the $	—	.8296	1.9990	.02611	.1790	.4257	.000855	.3830	.4883	.004523
Forward Exchange Cover 3-month, in percent p.a. *D* = discount, *P* = premium	—	1.327 *D*	4.8024 *P*	2.2976 *P*	2.5055 *D*	5.0234 *P*	6.4957 *D*	5.5055 *P*	7.2265 *P*	9.5884 *P*

Eurodollar Deposits
(London, interbank, bid)
June 17

7-day	18.25
1-month	16.75
3-month	16.75
6-month	16.3125

International Arbitrage
(3-month, hedged) + *in favor of U.S. dollars*

U.S.-U.K. Treasury Bills	−1.94
U.S.-Canada Treasury Bills	−2.09
U.S.-Canada Finance Co. Paper	−2.61
Eurodollars-U.K. Local Auth. Deposits	n. a.

Eurobonds
(average yield on recent straight debt issues)

U.S. Dollar Bonds	
7 yrs. and under	15.00
Over 7 yrs.	14.75
DM Bonds	
7 yrs. and under	10.75
Over 7 yrs.	10.50

Gold Price
London afternoon fixing
461.75
(per fine ounce)

The above interest rate quotations refer to the past week and may not be construed as offers by The Chase Manhattan Bank. The quotations for Bank Short-Term Rate to Best Customers, while including customary commissions, reflect neither possible other fees nor varying compensating balance requirements.
* Market rates as of June 10; bond yields as of June 5.

Current economic indicators of major industrial countries

	U.S.	Canada	Britain	France	Germany	Italy	Switzerland	Japan
Consumer prices*	10.0 (Apr.)	12.3 (May)	12.0 (Apr.)	12.7 (Apr.)	5.6 (May)	20.5 (May)	5.9 (May)	5.2 (Apr.)
Industrial production*	6.1 (May)	0.3 (Mar.)	−7.6 (Apr.)	−8.0 (Mar.)	−2.7 (Apr.)	−5.1 (Apr.)	1.0 (Dec.)	0.6 (Apr.)
Trade balance† *(billions of local currency units)*	−$3.46 (Apr.)	C$0.12 (Apr.)	£0.31 (Feb.)	−FF3.34 (May)	DM3.30 (Apr.)	−Lit.1,860 (Mar.)	−SF0.48 (May)	¥327 (Apr.)
Money supply (M1)*	10.6 (May)	6.5 (Mar.)	8.2 (Feb.)	10.1 (Jan.)	1.8 (Mar.)	12.9 (Dec.)	−3.6 (Feb.)	−2.1 (Feb.)
Velocity of money (M1)*	4.6 (Dec.)	−0.14 (Dec.)	11.4 (Sept.)	n. a.	0.6 (Dec.)	6.6 (Sept.)	n. a.	10.5 (Dec.)
Reserves minus gold *($ million, change from previous month)*	−720 (Apr.)	−547 (Apr.)	−614 (Apr.)	−60 (Apr.)	−455 (Apr.)	−2,652 (Mar.)	−1,680 (Apr.)	423 (Apr.)

* Percent change from 12 months earlier.

† Figures are only for the month indicated.

Relating Interest Rates and Exchange Rates

The observed relationship between exchange-rate changes and interest-rate movements underwent a major change with the Federal Reserve's adoption of its new operating policy in October 1979. Prior to the new monetary strategy, the rising trend of U.S. interest rates was accompanied by a declining dollar on the foreign-exchange markets. Since October 1979, however, U.S. interest rates and the dollar have moved together, a development that has been especially pronounced in recent weeks. A recent Chase study underscores the significance of this change for short-term exchange-rate forecasting, which relies heavily on the information transmitted to the market by interest-rate movements.

To understand the effect of the Federal Reserve's new operating strategy, it is useful to examine the significance of nominal interest rates and the market's perception of monetary policy in reacting to nominal interest-rate changes. The link between interest-rate changes and exchange-rate movements then becomes clear. Nominal interest rates comprise both a *real* component and an *inflation expectations* component. The former represents the price-adjusted return on investment, and the latter, the premium above the real return that compensates the investor for the expected change in the purchasing power of the currency in which his investment is denominated. The impact of changes in either of these two components is very different, as is market reaction to which component is perceived to have changed.

When world capital markets are in equilibrium, the demand for and supply of capital in its alternative uses are equal at the prevailing nominal interest rates. This implies that the real component of interest rates is identical across all countries (assuming the absence of effective capital controls). Under this scenario, there should not be large speculative movements of capital among countries, since there is little profit incentive. Investors will be content to earn the "world" real rate of return on their capital investments, secure in the knowledge that any differences in anticipated inflation rates are reflected in differences in the nominal interest rate. Equilibrium exchange rates will result, with the actions of speculators and arbitragers serving to smooth out daily fluctuations in exchange rates.

Adjustment of interest and exchange rates

Such an equilibrium may be upset, however, either by the appearance of a significant difference in the perceived real rate of return offered by variously denominated investments, or by a revision of inflation expectations of one or more currencies relative to others. In the instance of a shift in the anticipated real rate of return, the ensuing deviations in real interest rates are generally expected to be eliminated almost immediately—*before* any capital transactions and movement result—by the price adjustment of borrowers and lenders to shifts in relative returns. That is, exchange-rate movements, interest-rate movements, or both, will quickly eliminate the difference in expected real returns.

An important exception to this result may occur if the monetary authorities alter anticipated real returns in their pursuit of specific policy objectives. The combination of the U.S. monetary authorities' large holdings of Treasury securities and their disregard for "profits" in their market dealings may allow them to affect temporarily anticipated real returns, causing major capital movements and related exchange-rate changes in the short run. Such intervention results in a *direct* relationship between nominal interest rates and the exchange rate over the duration of the intervention. The short-run nature of these differences and associated capital flows, however, should be emphasized. Eventually, the effects of Federal Reserve domestic intervention are overcome as market participants seek to profit from the differences in perceived real rates of return across currencies.

In the contrasting case of a revision of inflation expectations, the relationship between nominal rates (assuming that the real component is unchanged) and the exchange rate is an *inverse* one. Taking the case of an upward revision of inflation expectations, exchange-rate depreciation will occur with a lag as *future* currency transactions reflect the change in relative inflation rates. This chain of events runs counter to the view held by some that changes in nominal interest rates are always synonymous with changes in real rates of return, and always move directly with capital inflows and currency appreciation.

The distinction between the real and inflation expectations component of nominal interest rates, although crucial to an understanding of the effects on foreign-exchange markets, is difficult to make in practice. To distinguish between the two, the market relies heavily on the perceived stance of monetary policy. If that policy is seen as passive and accommodating, interest-rate movements are interpreted as reflecting changes in inflation expectations alone, and will be associated with exchange-rate changes at some time in the future. In this instance, there is no reason to believe that expected real rates of return will have altered significantly, and, thus, no incentive for capital movements. If, on the other hand, monetary policy is seen as pursuing certain targets with respect to the

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money supply with determination, then changes in the real component of interest rates may become significant in determining capital movements and exchange-rate changes, especially in the short run.

Just such a contrast of attitudes and reactions to Federal Reserve policy was found in the Chase study. The study examines the relationships among U.S., West German, and U.K. interest and exchange rates, both before and after the October 1979 change in the Fed's operating strategy. When the differences between U.S. dollar and deutschemark interest rates and U.S. dollar and sterling interest rates of identical maturity are compared with the respective exchange rates, the sudden and dramatic shift in the market's interpretation of those interest-rate differentials shows up clearly with regard to *both* exchange rates. This despite any differences in the operating strategies of the foreign monetary authorities.

Using weekly data, the pre-October 1979 period reveals a significant direct link between relatively higher U.S. interest rates and dollar *weakness*. This would appear to confirm the impression that many in the market had that Fed policy was passive to inflation expectations. With the Federal Reserve committed to maintaining federal funds interest rates within a relatively narrow band, its ability to control the money supply was questioned, as was the future stability of the rate of inflation. The market identified the widening gap in U.S.-foreign interest rates as a sign of higher U.S. inflation and, consequently, future depreciation of the dollar.

The period since October 1979 tells a very different story. U.S. interest rates have been closely tied to dollar strength, reflecting the effect of Federal Reserve policy on perceived real returns in the short run. This has had the predictable effect on market perceptions: rather than continuing as dependable predictors of relative inflation expectations, weekly changes in interest rates have become dominated by changes in expected real returns (see chart below).

Some caveats

While it is still too early to perform this test with annual or even quarterly data, the likelihood of finding a similarly strong switch in the observed exchange-rate-interest-rate relationship is not high. Crucial to this argument is the premise that actions of the monetary authorities can affect the structure of expected real interest rates, at least in the short run. The Chase study supports such an assumption for weekly data, but the efficiency of international capital markets would argue against this assumption for longer periods.

Over the long run, the U.S. dollar's strength will reflect the success of Federal Reserve policy in reducing inflation (and inflation expectations). However, cyclical movements in the dollar can be expected as short-term real interest-rate differentials occur.

Mark Babunovic

Tracing the impact of interest-rate changes on exchange rates